

REMARKS

Claims 19-30 were pending in this application prior to the office action. By this amendment, claims 19 and 24-24 are amended, claim 20 is canceled, and new claim 31 is added. Accordingly, claims 19 and 21-31 currently are pending. In view of the above amendments and the following remarks, Applicants respectfully request reconsideration and withdrawal of the rejections of the claims.

The preambles of independent claims 19, 24, 25, 26, 27, and 28 are amended to improve readability. Claim 19 also has been amended to include features of now canceled claim 20. Further, independent claims 19, 24, 25, 26, 27, and 28 are amended to recite “forming the organic compound layer by co-depositing.” Additionally, the dashes (“-”) in claims 24, 25, 26, 27, and 28 are replaced with “to” to improve readability. Also, new dependent claim 31 recites the feature of “the metal salt including a metal element selected from the group consisting of a group of zinc, aluminum, silicon, gallium, and zirconium.” Support for this feature can be found at least on page 13, lines 3-4 of the specification.

In section 4, starting on page 2 of the Office Action, claims 19 to 30 are rejected under 35 U.S.C. § 112, second paragraph, for allegedly being indefinite. In response, Applicants have amended claim 19 to recite “co-depositing a metal salt and an organic compound including a proton-donating functional group and a functional group having a non-covalent electron pair over the anode or the cathode.” This claimed feature is supported throughout the original disclosure, for example, in page 24, lines 10-16, and page 29, lines 11-20 of the specification, and clarifies that the metal salt and the organic compound are co-deposited over the anode or the cathode. Independent claims 24, 25, 26, 27, and 28 are amended in a manner similar to claim 19 to clarify the claimed invention. Claim 19 is further amended to delete the recitation “showing Bronsted acid,” and to recite a feature “wherein the proton-donating functional group is one of a hydroxyl group, a carboxyl group and a mercapto group.” It is respectfully submitted that amended claims 19-30 now fully comply with Section 112, second paragraph. As such, this rejection should be withdrawn.

On page 4, section 6 of the Office Action, claims 19-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 409328679 (hereafter, “the ‘679 document”). This rejection is respectfully traversed. Before proceeding, it is to be noted that the Examiner

refers to a section of the '679 document (i.e., paragraph 0031) that was apparently translated into the English language by a "machine" translator. It is respectfully submitted that such machine translations cannot be relied upon as necessarily accurate or precise. Furthermore, it is not known whether the examiner considered the '679 document in Japanese or English. Applicants respectfully request that the Examiner indicate the form of this document he utilized in formulating his assertion that the '679 document discloses supplying the organic compound and zinc acetate sequentially in the abstract and paragraph 0031 because Applicants cannot find such a statement in the abstract and paragraph 0031.

Although JP-679 teaches an evaporation of the compound (1) after obtaining the compound (1) by adding zinc acetate to a solution including 2-(2-hydroxyphenyl) benzoxazole (see, paragraph 0058), it would appear that the '679 document fails to teach or suggest the claimed feature "co-depositing a metal salt and an organic compound ... over the anode or the cathode." Therefore, it is believed amended claim 19 neither teaches nor suggests the claimed combination each and every limitation of claim 19. Accordingly, this rejection of claim 19, and hence also claims 21-23 depending therefrom, should be withdrawn.

In section 7 of the Action, claims 19-23, 26 and 29-30 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Heuer et al. (US Patent No. 6,316,130). Although Heuer et al. teaches that a deposition of an organometallic complex (the substance B3) after obtaining the organometallic complex in a solution, it would appear that Heuer et al. also fails to teach or suggest the claimed feature "co-depositing a metal salt and an organic compound ... over the anode or the cathode," as now set forth in the context of amended independent claims 19 and 26. Therefore, it is believed that the subject matter recited in claims 19 and 26 is patentable over Heuer et al.

Finally, section 8 of the Action includes a rejection of claims 19-23, 26 and 29-30 under 35 U.S.C. § 103 (a) as being unpatentable over the Heuer et al. patent in view of WO 00/32719 (hereafter, "the '719 document). However, as pointed out above, Heuer et al. fails to teach or suggest co-depositing a metal salt and an organic compound including a hydroxyl group. With respect to the '719 document, although it is taught therein to co-deposit a metal compound and an organic complex such as TMHD, DBM, OPNP, or Phen (see, page 3, lines

19-21, page 4, lines 4-8, and page 5, lines 6-10), it appears that the '719 document fails to teach or suggest to use an organic compound including a hydroxyl group to form the organometallic compound as disclosed by Heuer et al. In view of this, Applicants respectfully submit that it is improper to substitute the organic compound coordinated with the metal element in Heuer et al. for the organic complex described in the '719 document because the organometallic compound disclosed by Heuer et al. is distinctly different from the organometallic compound disclosed by the '719 document. Accordingly, Applicants submit that any such conclusion would be based on impermissibly using of Applicants' own disclosure against them, because there is no suggestion or motivation in these disparate documents that would have led one of ordinary skill in the art to make the proposed modification to obtain a metal complex by co-depositing a metal salt and an organic compound including a hydroxyl group as a proton-donating functional group, as claimed. For at least these reasons, independent claims 19 and 26 are believed to recite novel and nonobvious subject matter.

In view of all of the foregoing, Applicants submit that this application is now in condition for allowance and such allowance is earnestly solicited.

Except for issue fees payable under 37 C.F.R. § 1.18, the Commissioner is hereby authorized by this paper to charge any additional fees during the entire pendency of this application including fees due under 37 C.F.R. §§ 1.16 and 1.17 which may be required, including the required two month extension of time fee, or credit any overpayment to Deposit Account No. 19-2380. This paragraph is intended to be a **CONSTRUCTIVE PETITION FOR EXTENSION OF TIME** in accordance with 37 C.F.R. § 1.136(a)(3).

Respectfully submitted,

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